



National Transportation Safety Board Aviation Accident Final Report

Location:	BISMARCK, ND	Accident Number:	DEN82DA079
Date & Time:	05/06/1982, 2107 CDT	Registration:	N4504Q
Aircraft:	CESSNA 402A	Aircraft Damage:	Substantial
Defining Event:		Injuries:	8 None
Flight Conducted Under:	Part 135: Air Taxi & Commuter - Non-scheduled		

Analysis

THE PILOT DISCOVERED THAT THE GEAR WOULD NOT EXTEND ELECTRICALLY. MANUAL EXTENSION WAS ATTEMPTED, BUT THE CRANK WOULD NOT TURN IN EITHER DIRECTION. WHILE APPLYING PRESSURE TO THE CRANKS, THE CHAIN DRIVE FAILED. THE PLANE WAS LANDED WITH THE GEAR RETRACTED. DISASSEMBLY OF THE EMERGENCY EXTENSION SYSTEM REVEALED THAT A SHAFT, PN 0843400-50, WAS BENT AND GOUGE MARKS WERE FOUND ON A TOOTH OF A BEVEL GEAR, PN 0843400-49. ALSO, THE MANUAL EXTENSION CHAIN, PN 500000-52, BETWEEN THE HAND CRANK AND BEVEL GEARS, HAD BROKEN. NO OTHER DISCREPANCIES WERE EVIDENT IN THE LANDING GEAR SYSTEM.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be:

Findings

Occurrence #1: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: LANDING - FLARE/TOUCHDOWN

Findings

1. (C) LANDING GEAR, EMERGENCY EXTENSION ASSEMBLY - JAMMED
2. WHEELS UP LANDING - PERFORMED - PILOT IN COMMAND

Factual Information

Pilot Information

Certificate:	Flight Instructor; Commercial	Age:	64, Male
Airplane Rating(s):	Multi-engine Land; Single-engine Land	Seat Occupied:	Unknown
Other Aircraft Rating(s):		Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	Airplane Multi-engine; Airplane Single-engine; Instrument Airplane	Toxicology Performed:	
Medical Certification:	Class 2 Valid Medical--no waivers/lim.	Last FAA Medical Exam:	09/10/1981
Occupational Pilot:		Last Flight Review or Equivalent:	
Flight Time:	30000 hours (Total, all aircraft), 179 hours (Total, this make and model), 30000 hours (Pilot In Command, all aircraft), 102 hours (Last 90 days, all aircraft), 5 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	CESSNA	Registration:	N4504Q
Model/Series:	402A 402A	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:		Serial Number:	402A0004
Landing Gear Type:	Retractable - Tricycle	Seats:	10
Date/Type of Last Inspection:	Unknown	Certified Max Gross Wt.:	6885 lbs
Time Since Last Inspection:	3 Hours	Engines:	2 Reciprocating
Airframe Total Time:	3378 Hours	Engine Manufacturer:	CONTINENTAL
ELT:	Installed	Engine Model/Series:	TSIO-520-E
Registered Owner:	CAPITAL AVIATION CORPORATION	Rated Power:	300 hp
Operator:	CAPITAL AVIATION CORPORATION	Operating Certificate(s) Held:	On-demand Air Taxi (135)

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Dusk
Observation Facility, Elevation:	BIS, 0 ft msl	Distance from Accident Site:	0 Nautical Miles
Observation Time:	2107	Direction from Accident Site:	0°
Lowest Cloud Condition:	Clear / 0 ft agl	Visibility	12 Miles
Lowest Ceiling:	Unknown / 0 ft agl	Visibility (RVR):	0 ft
Wind Speed/Gusts:	10 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	320°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29 inches Hg	Temperature/Dew Point:	40° C / 0° C
Precipitation and Obscuration:			
Departure Point:	FARGO, ND (FAR)	Type of Flight Plan Filed:	VFR
Destination:	MONTEREY, CA	Type of Clearance:	
Departure Time:	1930	Type of Airspace:	

Airport Information

Airport:	BISMARCK MUNICIPAL (BIS)	Runway Surface Type:	Asphalt
Airport Elevation:	0 ft	Runway Surface Condition:	Dry
Runway Used:	35	IFR Approach:	
Runway Length/Width:	4009 ft / 100 ft	VFR Approach/Landing:	Straight-in

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	7 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	8 None	Latitude, Longitude:	

Administrative Information

Investigator In Charge (IIC):	Report Date:	05/06/1983
Additional Participating Persons:		
Publish Date:		
Investigation Docket:	NTSB accident and incident dockets serve as permanent archival information for the NTSB's investigations. Dockets released prior to June 1, 2009 are publicly available from the NTSB's Record Management Division at pubinq@ntsb.gov , or at 800-877-6799. Dockets released after this date are available at http://dms.nts.gov/pubdms/ .	

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The Independent Safety Board Act, as codified at 49 U.S.C. Section 1154(b), precludes the admission into evidence or use of any part of an NTSB report related to an incident or accident in a civil action for damages resulting from a matter mentioned in the report. A factual report that may be admissible under 49 U.S.C. § 1154(b) is available [here](#).